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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

SHERMAN, STEPHEN G

ART UNIT PAPER NUMBER

2629

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/720,082

Applicant(s)

KITAGAWA, DAISAKU

Examiner

Stephen G. Sherman

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-13 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 8 is objected to because it recites the limitation "the arithmetic operation unit." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 claims a computer program comprising steps. Steps are associated with a method claim, therefore the claim is indefinite in that it is unclear whether the applicant is claiming a program or a method.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama et al. (JP 11-065531) in view of Cui (US 2003/0001815).

Regarding claim 1, Motoyama et al. disclose an image display control apparatus that controls light transmittance of liquid crystals of a liquid crystal display screen for displaying an image based on an inputted image signal and controls, according to the light transmittance of the liquid crystals, an amount of light emitted by a backlight unit for

illuminating a back of the liquid crystal display screen based on the image signal (Drawing 4 and paragraph [0001]), the image display control apparatus comprising:

an image state detection unit operable to detect a state of the image based on the image signal (Drawing 4 and paragraph [0028] explain that data analysis section 211 detects the state of the image input from image memory 202.);

an image signal transformation unit operable to transform the image signal by performing predetermined signal processing on said image signal based on the state of the image detected by the image state detection unit, and control the light transmittance of the liquid crystals based on the transformed image signal (Drawing 4 and paragraph [0031] explain that the datcoord section 212 is able to adjust the image data so as the light transmittance of the liquid crystals are controlled based on the adjusted signal.).

Motoyama et al. fail to teach of the image display comprising a resource control unit operable to assign an arithmetic operation resource for performing an arithmetic operation exclusively to the image state detection unit and the image signal transformation unit respectively at predetermined timings, wherein the image state detection unit detects the state of the image using the assigned arithmetic operation resource, and the image signal transformation unit transforms the image signal using the assigned arithmetic operation resource.

Cui discloses of an image display comprising a resource control unit operable to assign an arithmetic operation resource for performing an arithmetic operation exclusively to display control circuitry for adjusting the display brightness (Figures 5 and 6 and paragraph [0037] explain that the software program 555 determines how the

brightness of a display should be changed and inputs the data into a control unit for adjusting the display brightness.).

Therefore, it would have been obvious to “one of ordinary skill” in the art at the time the invention was made that instead of the image datcoord parameter being calculated in the data analysis section 211 taught by Motoyama et al. that the parameters would be set by an outside software program as taught by Cui such that the data analysis section 211 would receive the software input to define the image datcoord parameter in order to reduce the power consumption of the device while maintaining a display image quality.

Regarding claim 10, this claim is rejected under the same rationale as claim 1.

Regarding claim 12, this claim is rejected under the same rationale as claim 1.

Regarding claim 13, please refer to the rejection of claim 1, and furthermore Motoyama et al. also disclose a liquid crystal display screen operable to display an image (Drawing 4, item 111) and a backlight unit operable to illuminate a back of the liquid crystal display screen (Drawing 4, item 112).

9. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama et al. (JP 11-065531) in view of Cui (US 2003/0001815) and further in view of Herrmann (US 2003/0197674).

Regarding claim 2, Motoyama et al. and Cui disclose the image display control apparatus according to Claim 1.

Motoyama et al. and Cui fail to teach that the image display control apparatus further comprises a color space transformation unit operable to transform a color component signal consisting of R, G and B component signals in the image signal into a color information signal including at least a brightness signal and a chroma signal, and output said color information signal to the image signal transformation unit, wherein the resource control unit assigns the arithmetic operation resource exclusively to the color space transformation unit at a predetermined timing, and the color space transformation unit transforms the color component signal into the color information signal using the assigned arithmetic operation resource.

Herrmann discloses of an image display control apparatus comprising a color space transformation unit operable to transform a color component signal consisting of R, G and B component signals in the image signal into a color information signal including at least a brightness signal and a chroma signal, and output said color information signal (Figure 1 and paragraph [0018] explains that the color space converter 22 can convert video data to or from luminance/chrominance space and red/green/blue (RGB) color space as necessary.).

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made that the image display control apparatus taught by the combination of Motoyama et al. and Cui contains a color space transformation unit as

taught by Herrmann such that the color space transformation unit would transform the signals based on the software signal in order to allow for the individual adjustment of the luminance, hue and saturation of the image.

Regarding claim 3, Motoyama et al., Cui and Herrmann disclose the image display control apparatus according to Claim 2.

Herrmann also discloses a display control apparatus further comprising a color space transformation unit operable to transform the color information signal including at least the brightness signal and the chroma signal into the color component signal consisting of the R, G and B component signals and output said transformed color component signal (Figure 1 and paragraph [0018] explains that the color space converter 22 can convert video data to or from luminance/chrominance space and red/green/blue (RGB) color space as necessary.).

Regarding claim 4, Motoyama et al., Cui and Herrmann disclose the image display control apparatus according to Claim 3.

Motoyama et al. also disclose wherein the image signal transformation unit includes:

a brightness transformation unit operable to transform the brightness signal outputted from the color space transformation unit, based on the state of the image detected by the image state detection unit (Paragraph [0031] explains that the datcoord section 212 is able to transform the brightness signal.); and

Cui also discloses a chroma transformation unit operable to transform the chroma signal outputted from the color space transformation unit (Figure 1, image processing unit 24. It is known that image processing unit would contain the ability to perform chrominance adjustment.).

Regarding claim 5, Motoyama et al., Cui and Herrmann disclose the image display control apparatus according to Claim 4.

Cui also discloses an image display control apparatus further comprising a clock signal generation unit operable to generate a clock signal (Figure 1, Timing Control 40. The software signal of the combined system of Motoyama et al., Cui and Herrmann would be applied according to a timing signal.).

Regarding claim 11, this claim is rejected under the same rationale as claim 5.

Allowable Subject Matter

10. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

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The primary reason for indicating claim 6 allowable is the inclusion of the limitation of processing occurring on each pixel in the image signal and the inclusion of the time interval between inputs of said each pixel in the image signal being longer than the cycle of the clock signal generated by the clock signal generation unit, in combination with the other claimed limitations, which is not found singularly or in combination in the prior art.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

26 June 2006

AMR A. AWAD
PRIMARY EXAMINER
